



# Few-optical-cycle solitons: Modified Korteweg-de Vries sine-Gordon equation versus other non-slowly-varying-envelope-approximation models

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Auteur	Leblond, Hervé [1], Mihalache, Dumitru [2]
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Résumé en anglais	We put forward through both analytical and numerical methods the advantage of using non-slowly-varying envelope-approximation model equations for describing the propagation of few-optical-cycle pulses in transparent media. It is proven that the dynamical model based on the generic modified Korteweg-de Vries sine-Gordon equation retrieves the results reported so far in the literature, and so demonstrating its remarkable mathematical capabilities in describing the physics of few-cycle-pulse optical solitons.
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## Liens

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- [2] [http://okina.univ-angers.fr/publications?f\[author\]=8696](http://okina.univ-angers.fr/publications?f[author]=8696)
- [3] <http://okina.univ-angers.fr/publications/ua5177>
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